



Cultural Sustainability Models: Using our "Ways of Knowing" in Management

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Environmental Successes

EPA's history over the past 35 years has shown:

- many environmental improvements have been accomplished
- policies and programs have been developed to address environmental issues

Cuyahoga River – November 3, 1952



Valley of the Drums



Endangered Species: Bald Eagle



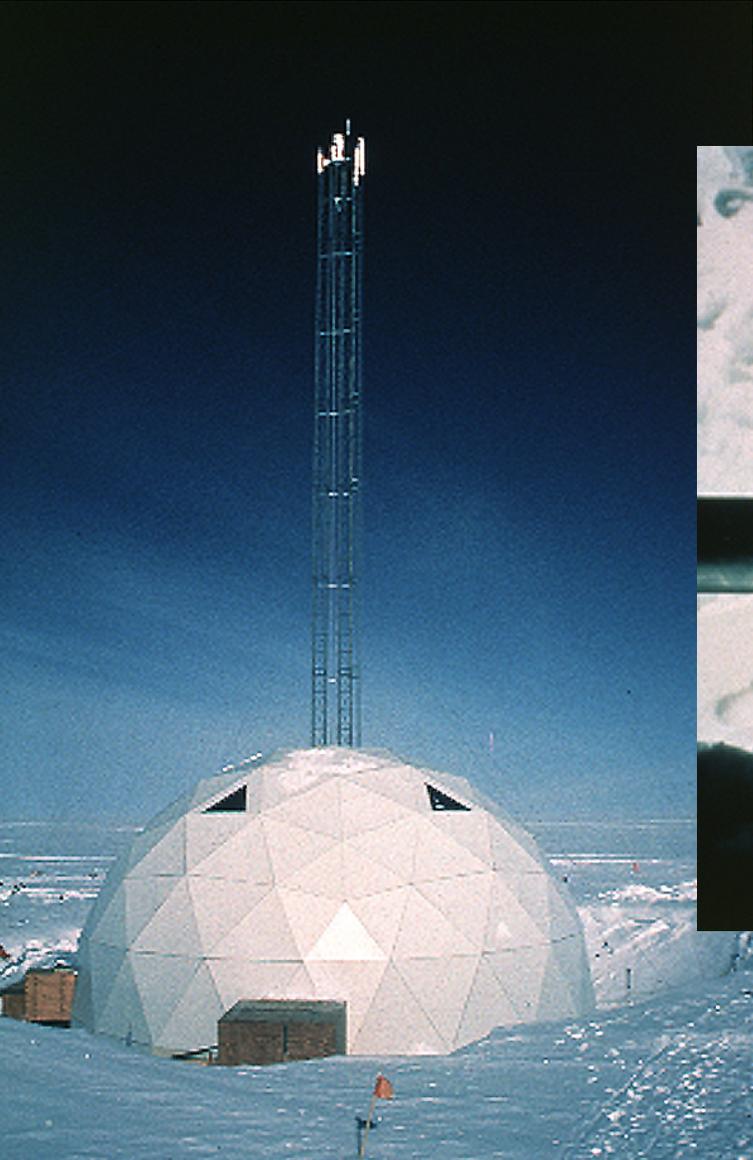
New and Challenging Issues





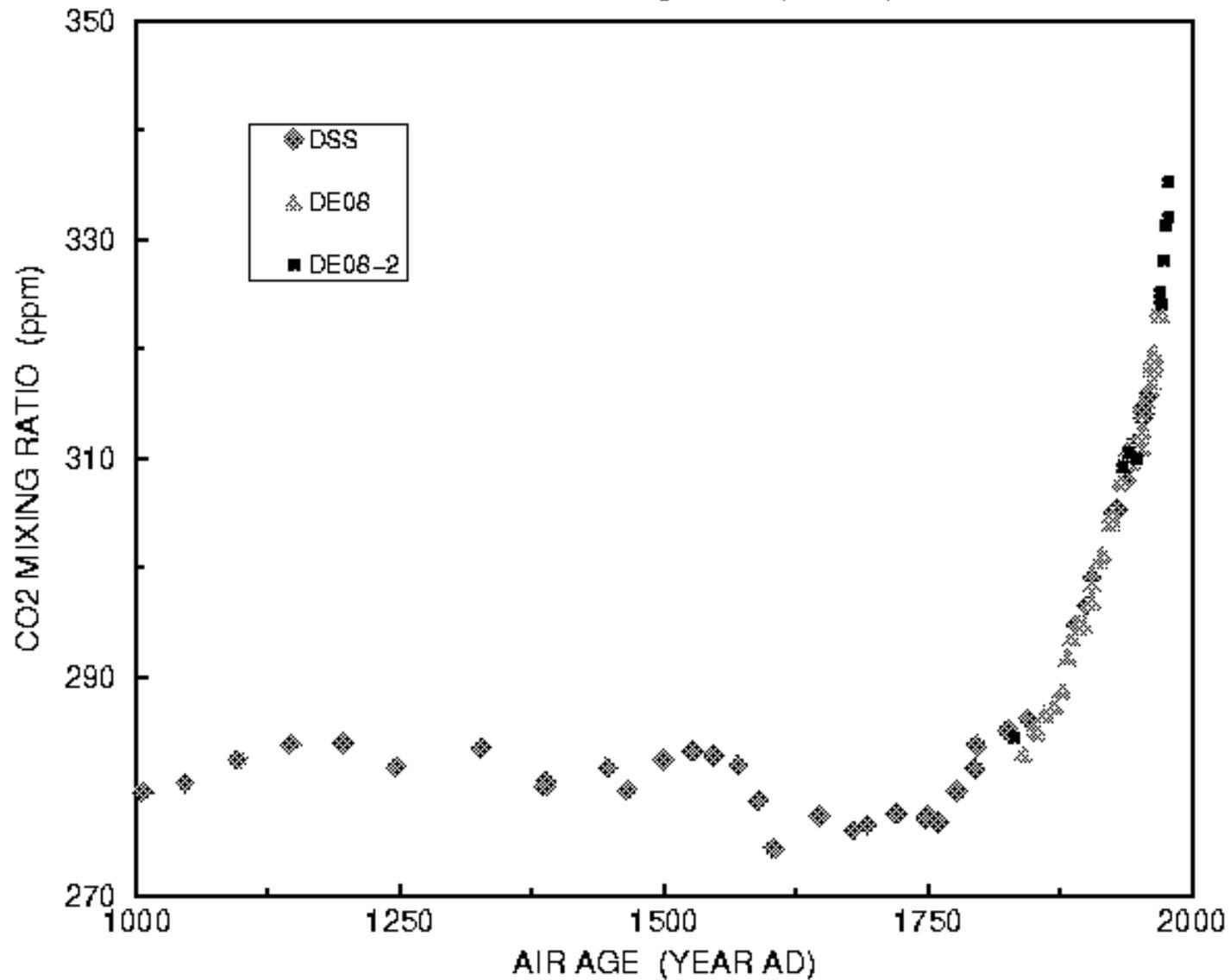
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Ice Cores



LAW DOME, ANTARCTICA ICE CORES

Source: Etheridge et al. (CSIRO)





IMPACTS OF A WARMING ARCTIC

Projected Ice Extent

(2010-2030)



(2040 - 2060)



(2070 - 2090)









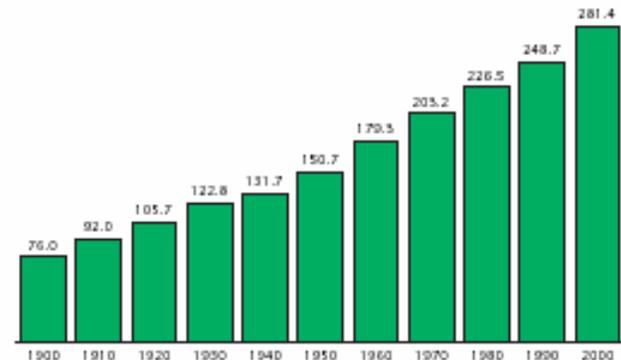
National Human Health Issues

- Physical
 - People are developing chronic diseases
 - People are becoming obese
 - Infectious diseases are on the increase
- Mental
 - Depression
 - Happiness
 - Other Factors

National Social Issues

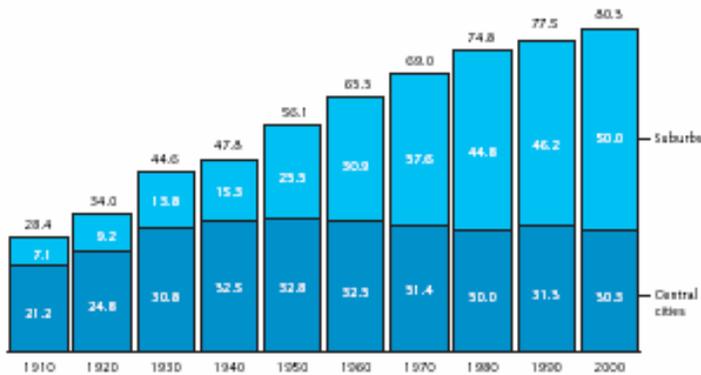
- Population
- Land use
- Driving
- Energy

Figure 1-1.
Total Population: 1900 to 2000
(billions)



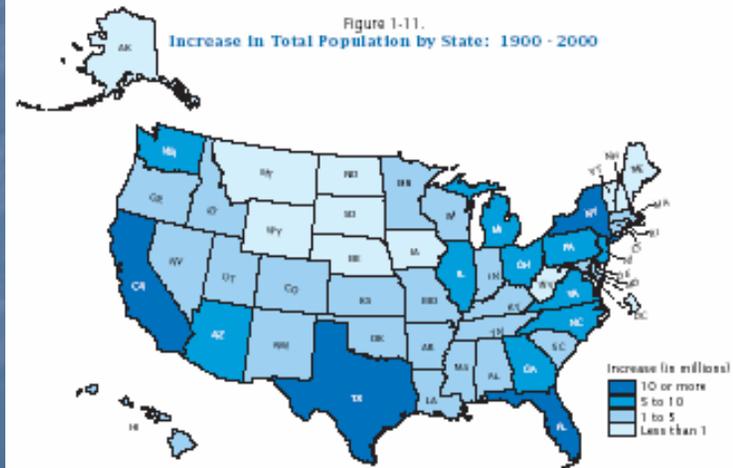
Source: U.S. Census Bureau, decennial census of population, 1900 to 2000.

Figure 1-15.
Percent of Total Population Living in Metropolitan Areas and
in Their Central Cities and Suburbs: 1910 to 2000



Source: U.S. Census Bureau, decennial census of population, 1910 to 2000.

Figure 1-11.
Increase in Total Population by State: 1900 - 2000



Source: U.S. Census Bureau, decennial census of population, 1900 and 2000.

Tribal Issues

- Unable to follow their tribal traditional ways of life
- Losing traditional knowledge, language and income by not being able to use it
- Natural resources are either not available or declining.
- Global sources of contamination and warming are impacting tribal lands.
- American Indians have some of the poorest health since unable to consume traditional foods and eating alternative food sources.
- National criteria and standards are not protective of community health or natural resources.

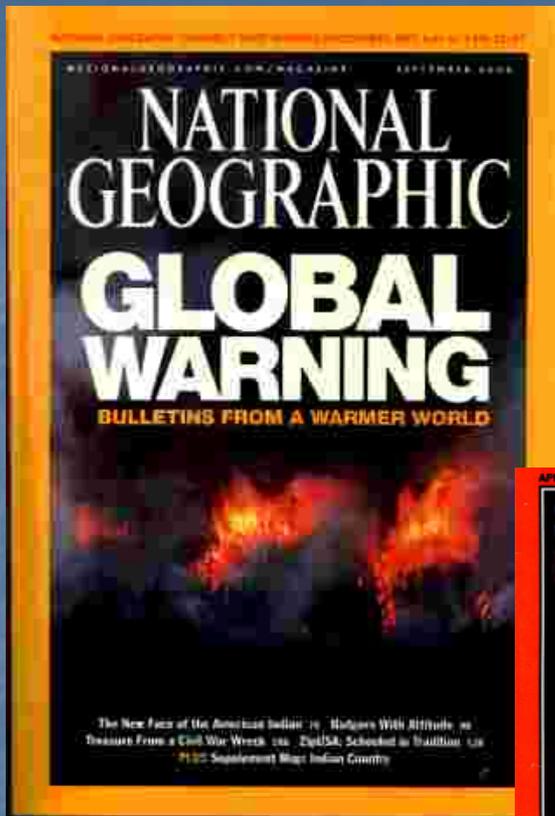


Federal Government

*“The federal government is on a
“burning platform,” and the status quo
way of doing business is unacceptable.”*

David Walker,

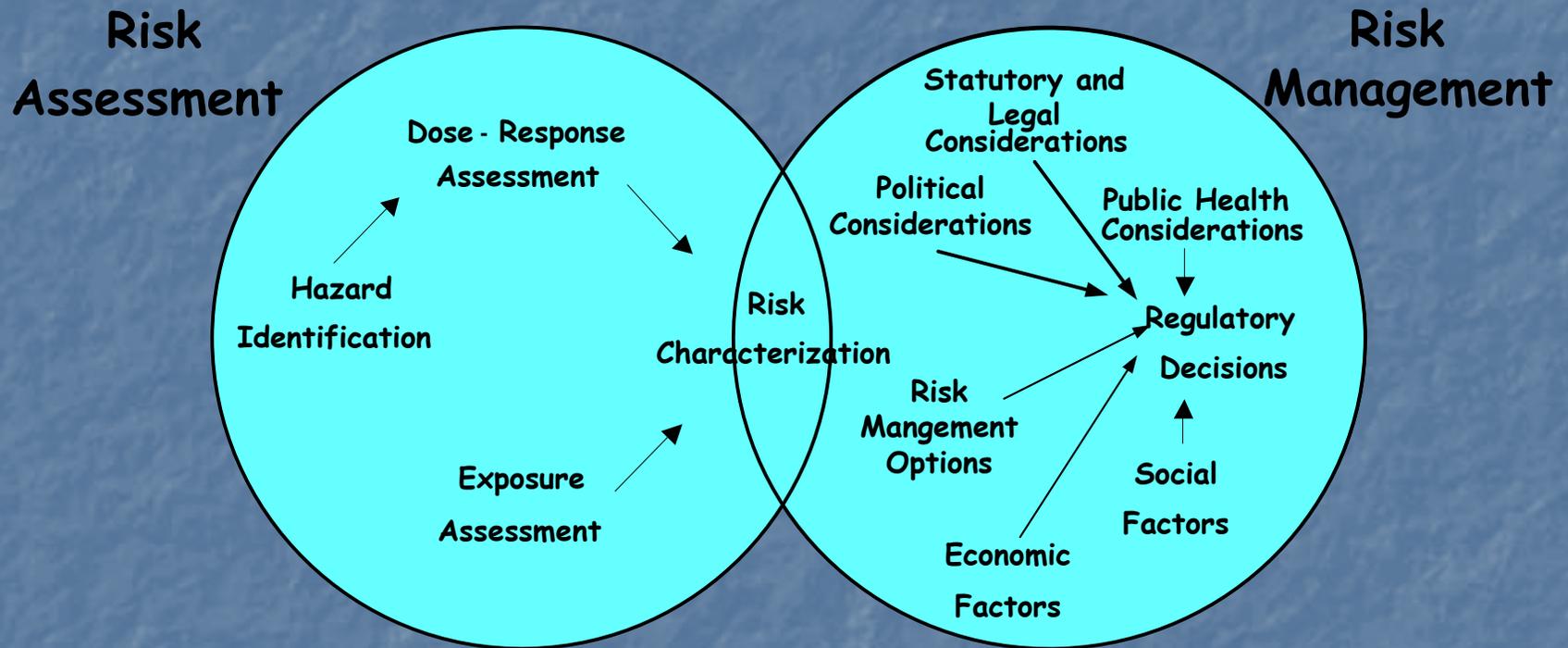
**Comptroller General of the United States
Government Accountability Office (GAO)**





National Cultural Sustainability Model

Current Agency environmental decision making



Risk Assessment Paradigm

The current approach isn't sufficient

- Tribal perspective/activities not considered
 - tribal uses,
 - consumption and sensitivity,
 - range of species (e.g., wildlife)
- Current system based on risk assessment paradigm that assesses sickness not health
- Principles of sustainability have been put into practice only limitedly
- Approaches do not adequately address environmental, social, economic, cultural and spiritual relationship issues
- Solutions are not context driven or culturally relevant

What is Sustainability?

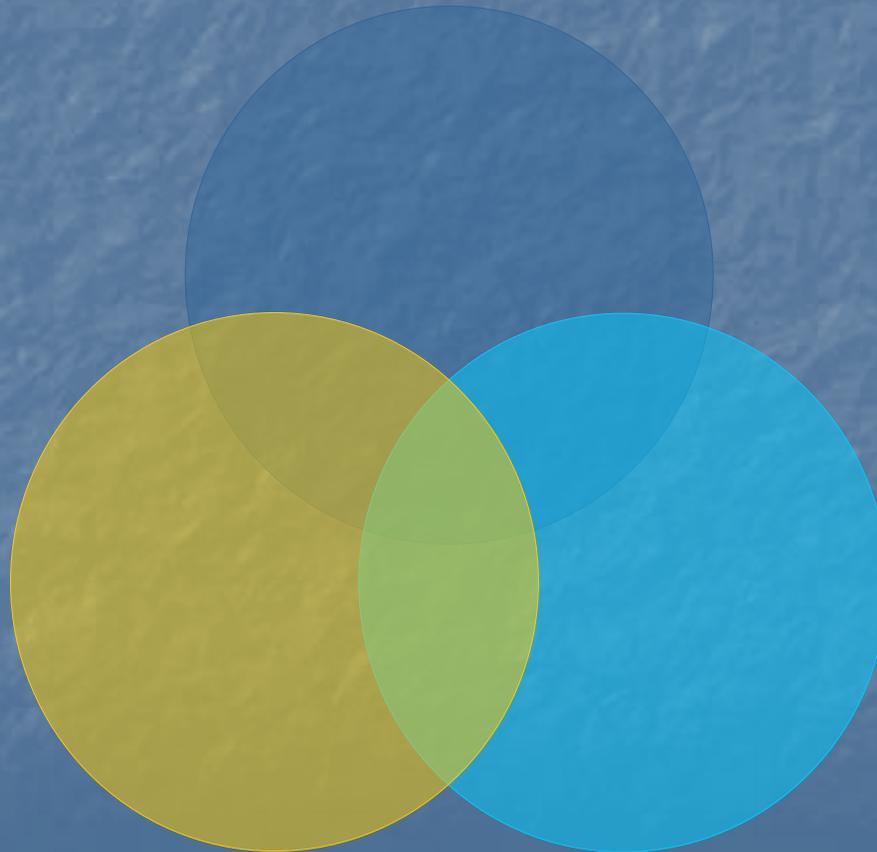
Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

WCED "Our Common Future"

The Brundtland Report 1987

Sustainability Conceptual Model

Environment



Economic

Social

SUSTAINABILITY IS A TRANSITION

From

- short-term thinking
- an economy outside of nature
- a linear flow of resources
- depleting natural resources
- seeing environmental, social and economic challenges as separate and competing

To

- long-term thinking
- an economy integrated with nature
- a systems flow of resources
- renewable energy
- seeing environmental, social, and economic challenges as an interconnected whole

EPA has started to embrace Sustainability

- EPA Strategic Plan
 - Objective 5.4: Enhance Society's Capacity for Sustainability through science and research
- Sustainability Research Program
 - Research Strategy
 - Multi Year Plans
 - Grants
- Agency activities
 - Baseline assessment
 - Training
 - Sustainability Summit

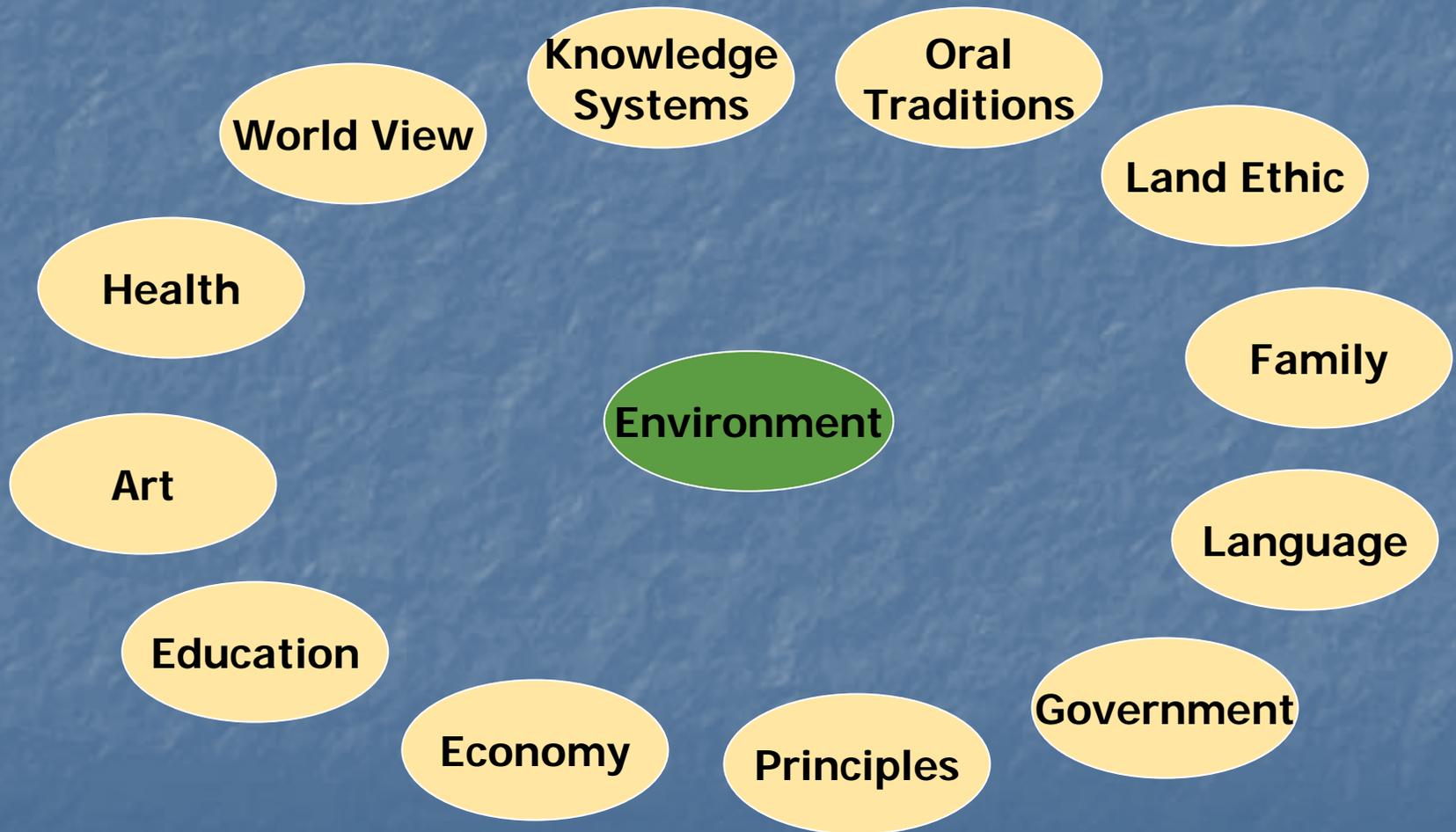
National EPA-Tribal Science Council: Health and Well Being Paradigm

- Incorporate a Health-based Focus
- Focus on Risk Prevention
- Incorporate Cumulative Impacts
- Create a Holistic Paradigm---One that Incorporates Impacts to Community Health,
Culture, Lifeways, Well-being and the Environment
- Include Health and Wellness Indicators
- Use a Cross-Media Approach
- Reflect the Precautionary Principle
- Recognize that for Some Tribes, a "Zero Contamination Policy" Exists
- Work with Tribes on a Government-to-Government Basis

National Approach Is Tribally Based

- Philosophy and approach originates from American Indians
- Relational world view (perspective)
- Respects the natural law
- Considers future generations
- Based on tribal principles, laws and traditional teachings (examples)
 - Great Law of Peace
 - One Dish One Spoon
 - Two Row Wampum belt
 - Creation mythology
 - Thanksgiving Address

Culturally-based



Fundamental Concepts

- Recognizes the dependency of people, social activities, culture, and economics on the environment and interconnectiveness
- Approach based on what does it take to have a “healthy state” (proactive); rather than addressing “sickness” due to exposure (reactionary)
- Provides for decisions within a context for both daily activities and future (seven) generations
- Balances the use of natural resources and people
- Charges people with respect, equity, empowerment, and responsibility
- Addresses and respects people’s values and cultures.
- Provides a practical process for people (individual and corporate) to address issues

Conclusions

- Issues we are facing are complex and urgent!
- We must develop a global and multilateral solutions to effectively address the issues.
- It is our responsibility to be better positioned for the future.